

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
21 May 2004 (21.05.2004)

PCT

(10) International Publication Number  
**WO 2004/041848 A1**

(51) International Patent Classification<sup>7</sup>: C07K 1/02, 1/14, 1/24, 1/26, 1/28, 1/30, 1/36

(74) Agent: F B RICE & CO; 605 Darling Street, Balwain, NSW 2041 (AU).

(21) International Application Number:  
PCT/AU2003/001448

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date:  
3 November 2003 (03.11.2003)

(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(25) Filing Language:  
English

Published:  
— with international search report

(26) Publication Language:  
English

(30) Priority Data:  
2002952533 4 November 2002 (04.11.2002) AU

(71) Applicant (*for all designated States except US*): PROTEOME SYSTEMS INTELLECTUAL PROPERTY PTY LTD [AU/AU]; Unit 1, 35-41 Waterloo Road, North Ryde, NSW 2113 (AU).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): HERBERT, Benjamin, Ross [AU/AU]; 3 Douglas Avenue, North Epping, NSW 2121 (AU).

WO 2004/041848 A1

(54) Title: IMPROVED EXTRACTION OF A PROTEINACEOUS MACROMOLECULE FROM A BIOLOGICAL SAMPLE

(57) Abstract: The invention provides a method of treating a biological sample to extract a macromolecule under acidic conditions. In one aspect the present invention provides a method for enhancing the solubilisation of at least one proteinaceous macromolecule in a biological sample without inducing substantial acid hydrolysis of said proteinaceous macromolecule, said method comprising incubating the biological sample in a solubilisation reagent at a pH between about pH 1.0 and about pH 6.0. The invention also provides novel reagents and kits for extraction of macromolecules from biological samples.